

Serial No. 09/852,002

REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 1, 27 and 29 are amended. Claims 1-32 are pending in the application.

Entry of Amendment under 37 C.F.R. § 1.116

The Applicant requests entry of this Rule 116 Response because: the amendments were not earlier presented because the Applicant believed in good faith that the cited references did not disclose the present invention as previously claimed; the amendment of claims 1, 27 and 29 should not entail any further search by the Examiner since no new features are being added and no new issues are being raised; and the amendment does not significantly alter the scope of the claim and places the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures (M.P.E.P.) sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The M.P.E.P. further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

I. Rejection under 35 U.S.C. § 102

In the Office Action, at page 4, numbered paragraph 3, claims 3, 4, 13, 14, 18, 19, 28 and 29 were rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,084,843 to Abe et al. This rejection is respectfully traversed because Abe does not discuss or suggest:

a single diffraction grating *selectively splitting the first and the second laser beams* into three rays depending on which optical disk is to be accessed [claim 3],

a single diffraction grating selectively splitting the first and second laser beams into a main ray and two sub-rays depending on which optical disk is to be accessed [claim 13],

selectively splitting the first and second laser beams into three rays depending on which optical disk is to be accessed with a single diffraction grating [claim 18],

selectively splitting the first and second laser beams with a single

Serial No. 09/852,002

diffraction grating into a main ray and two sub-rays depending on which optical disk is to be accessed [claims 28 and 29],

as recited in claims 3, 13, 18, 28 and 29, respectively.

As a non-limiting example, the apparatus as recited in, for example, claim 1 includes a first and a second diode, each diode emitting a first and second laser beam of a different wavelength. Each of the first and second laser beams may be selectively split by a single diffraction grating into three rays. A photo-detector selectively receives the three rays of the first beam and the three rays of the second beam at different detecting portions so that the data from various types of optical disks may be recorded or reproduced.

Abe discusses two laser chips (21A and 21B) each being incorporated in a compound laser diode, one of the chips generating laser light of a first wavelength and the other chip generating laser light of a second wavelength. Abe discusses that "the laser chip 21A...is designed to allow the laser light of the first wavelength to emerge toward a grating." Abe further discusses that "the grating divides the laser light from the laser chip 21A by a substantially predetermined number (for example, three) and allows the divided laser lights to be incident upon the beam splitter." Abe does **not** discuss or suggest that the laser light from laser chip 21B is divided by the grating. Fig. 9 clearly shows a light emerging from the compound diode that is generated by laser chip 21B and passes *directly* to the beam splitter, while Fig. 10 shows a light emerging from the compound diode that is generated by laser chip 21A and then passes *through the grating*, then light split by the grating passes to the beam splitter. In fact, Abe specifically clarifies this point at col. 7, lines 59-61, stating "the beam splitter is designed to allow the laser light *from the grating or the laser chip 21B* to pass through itself," clearly implying that light from laser chip 21A is divided by the grating, while light from laser chip 21B passes straight to the beam splitter. Abe does not discuss or suggest that the grating *selectively splits* the first and the second laser beams, based on which optical disk is to be accessed. The grating, which the Examiner has acknowledged is represented by reference number 22A in Figs. 9 and 10 and 112A in Fig. 4, merely divides the laser light from the first laser chip 21A. Abe makes no discussion as to selectively splitting one or the other of the laser beams.

Therefore, as Abe does not discuss or suggest "a single diffraction grating *selectively splitting the first and the second laser beams* into three rays depending on which optical disk is to be accessed," as recited in independent claim 3 and similarly in claims 13, 18, 28 and 29, claims 3, 13, 18, 28 and 29 patentably distinguish over the reference relied upon. Accordingly, withdrawal of the § 102(e) rejection is respectfully requested.

Serial No. 09/852,002

Claims 4, 14 and 19 depend directly or indirectly on independent claims 3, 13 and 18, respectively, and include all the features of the respective independent claims, plus additional features that are not discussed or suggested in the reference relied upon. For example, claim 4 recites that "the photo-detector receives the main ray of the first laser beam on the central detecting portion to determine a focus error and to record and/or reproduce the data on/from the first optical disk, and receives the sub-rays of the first laser beam on the peripheral detecting portions to determine a tracking error." Therefore, as claims 4, 14 and 19 are dependent on claims 3, 13 and 18, respectively, claims 4, 14 and 19 patentably distinguish over the reference relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 102(e) rejection is respectfully requested.

II. Rejection under 35 U.S.C. § 103

In the Office Action, at page 8, numbered paragraph 9, claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,552,990 to Kajiyama et al. in view of Abe. This rejection is respectfully traversed.

Kajiyama discusses a "semiconductor laser [that] further includes laser chips 1a and 1b oscillating laser beams with the wavelengths of 635 nm and 780 nm, respectively." Kajiyama discusses that a "diffraction grating is formed for allowing transmission of the laser beam with the wavelength of 635 nm through peripheral region 5a of optical device 5 without any diffraction and for substantially shielding the laser beam with the wavelength of 780 nm by diffraction." The Examiner acknowledges that Kajiyama does not discuss or suggest "the photo-detector having at least a first detecting portion and a second detection [sic] portion," nor does Kajiyama discuss or suggest "the first detection portion at a first location receiving the main ray of the first laser beam; and the second detection portion is at a different location receiving the main ray of the second laser beam." Kajiyama fails to discuss "the photo-detector having a central portion and at least one peripheral portion, the central portion receiving the main ray of the first laser beam based on the first position of the diffraction grating and at least one of the peripheral portions receiving the main ray of the second laser beam based on the second position of the diffraction grating," as recited in amended independent claim 1. The Examiner cites Abe as making up for the deficiency in Kajiyama.

Abe fails to make up for the deficiency in Kajiyama. Abe discusses that "the photodetector unit includes a photodetector part 28A to detect a reflected light from a CD (of the wavelength λ_1), and a photodetector part 28B to detect a reflected light from a DVD (having the wavelength λ_2)." Abe further discusses that "the photodetector 28A essentially comprises

Serial No. 09/852,002

photodetector elements 61, 62 and 63," and that "photodetector element 63 is a quad detector consisting of four quadrants 63A to 63D." On the other hand, Abe discusses that "the photodetector part 28B is a quad or four-element photodetector consisting of four photodetector elements or quadrants 64A to 64D." Abe does not discuss or suggest that one of the peripheral portions of the photodetector (either quadrants 63A to 63D or 64A to 64D) receives the main ray of the second laser beam based on the second position of the diffraction grating and the central portion of the photodetector receives the main ray of the first laser beam when the diffraction grating is in a first position. Abe shows in Fig. 11 a central portion of photodetector part 28A and peripheral portions and suggests that light from the CD is received at all photodetector elements 61, 62 and 63. However, Abe only shows a central quad photodetector 64A to 64D that receives light from the DVD. Abe does not discuss or suggest that the peripheral portion of the photodetector receives the main ray of the second beam when the diffraction grating is in a second position and the central portion of the photodetector receives the main ray of the first beam when the diffraction grating is in the first position.

The applicants respectfully submit that the rejection fails to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or discuss all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See M.P.E.P. § 2142.

The applicants respectfully submit that neither Kujiyama nor Abe refer to all the elements of independent claim 1, as is necessary to establish a *prima facie* case of obviousness. Therefore, the applicants respectfully submit that Kujiyama fails to discuss or suggest "the photo-detector having a central portion and at least one peripheral portion, the central portion receiving the main ray of the first laser beam based on the first position of the diffraction grating and at least one of the peripheral portions receiving the main ray of the second laser beam based on the second position of the diffraction grating," as recited in independent claim 1. Abe fails to make up for the deficiencies in Kujiyama. Accordingly, claim 1 patentably distinguishes over the reference relied upon. Therefore, withdrawal of the § 103(a) rejection is respectfully requested.

Serial No. 09/852,002

Claim 2 depends directly from independent claim 1 and includes all the features of that claim, plus additional features that are not discussed or suggested by the references relied upon. For example, claim 2 recites that "the photo-detector is a single unit on which both the first and the second detecting portions are formed." The Applicant notes that the Examiner stated on page 9 of the outstanding Office Action that "the photodetector 1 is a single unit on which both the first and second detecting portions 1a, 1b are formed (Fig. 2)." However, the Applicant would draw to the Examiner's attention that the photodetector to which the Examiner had previously referred was reference number 8 and reference number 1 was indicated as the "package", and further, that reference numbers 1a and 1b were previously indicated as "first and second laser diodes" and not as "first and second detecting portions." Therefore, as claim 2 is dependent on independent claim 1, claim 2 patentably distinguishes over the references relied upon for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

III. Allowable Subject Matter

Applicants appreciate the acknowledgement by the Examiner that claims 5-12, 15-17, 20-26 and 30-32 are allowable.

Applicants appreciate the acknowledgement by the Examiner that claim 27, which is objected to, would be allowable if rewritten in independent form to include all of the features of the base claim. Accordingly, claim 27 has been rewritten in independent form.

Serial No. 09/852,002

Conclusion

In accordance with the foregoing, claims 1, 27 and 29 have been amended. Claims 1-32 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

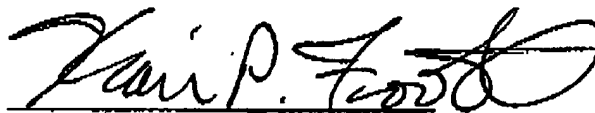
Respectfully submitted,

STAAS & HALSEY LLP

Date:

5/2/06

By:



Kari P. Footland

Registration No. 55,187

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501